



STATE OF WASHINGTON
WASHINGTON STATE BOARD OF HEALTH
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March 13, 2002

TO: Washington State Board of Health Members

FROM: Carl Osaki, WSBOH Member

RE: School Indoor Air Quality – Update from the Department of Health

Background and Summary:

Citizens who testified on school indoor air quality (IAQ) in the past contacted Board staff and requested to update the Board on their concerns regarding the IAQ at Cle Elum schools. The Department of Health also asked to update the Board on its' Indoor Air Program's investigation of the IAQ at Cle Elum schools and the program in general.

The Board has authority to:

adopt rules controlling public health related to environmental conditions including but not limited to heating, lighting, ventilation, sanitary facilities, cleanliness and space in all types of public facilities including but not limited to food service establishments, schools, institutions, recreational facilities and transient accommodations and in places of work [RCW 43.20.050 (2) (c)].

Minimal environmental standards for educational facilities are set forth in WAC 246-366. Local health officers review and approve new facility and major alteration plans, and make periodic inspections of each existing school within their jurisdictions (WAC 246-366-040). These rules were last revised in 1991.

School Indoor Air Quality has been a recurring topic during Board meetings over the last eight years. In 1994, the Board adopted a motion regarding six actions on schools and school environments. These actions resulted in the Department of Health convening workgroups and producing several reports:

- School IAQ Best Management Practices Manual, February 1995
- Implementation Survey Report – WAC 246-366 Primary and Secondary Schools, February 12, 1997
- Health and Safety Guide for K-12 Schools in Washington, with OSPI, December 2000

At its April 8, 1998 Board meeting, the Board heard testimony from citizens primarily about mold and health problems experienced by students and teachers at Bainbridge Island and Cle Elum schools. A 1998 National Institute for Occupational Safety and Health (NIOSH) Health Hazard Evaluation Report also stated that the Cle Elum-Roslyn High School had large concentrations of mold growth in some areas of the school. Water incursion, due to a burst water pipe and a leak roof, and air-handling units built in a crawl space with air intakes below grade level led to conditions conducive to mold growth, according to the NIOSH report and public testimony.

Health effects from mold exposure generally fall into four categories: allergy, infection, irritation (mucous membrane and sensory), and toxicity (from “Is Indoor Mold Contamination a Threat to Health?” at <http://www.doh.wa.gov/ehp/oehas/mold.html>).

- Allergic reactions can range from mild, transitory responses to severe, chronic illnesses. Infections can affect the skin, eyes, lung or other organs and systems.
- Molds produce volatile organic compounds that can irritate mucous membranes and can affect the central nervous system, producing symptoms such as headache, attention deficit, inability to concentrate or dizziness.
- Odors from molds can cause headache, nasal stuffiness, nausea, or vomiting in some people.
- Toxicity can arise from inhalation of mycotoxin-containing spores or through skin contact with toxigenic molds, such as *Aspergillus*, *Penicillium*, and *Stachybotrys*, and can affect vascular, digestive, respiratory, nervous, cutaneous, urinary, reproductive and immune systems.

School IAQ problems are not limited to Bainbridge Island and Cle Elem schools, however. A February 28, 2002 article described the extensive impact of IAQ problems on schools, including the closure of Artondale Elementary School, in Pierce County (article attached). Assessments of 156 Washington schools during the 2000-2001 school year found that 42.5 percent of classrooms had high carbon dioxide levels, indicating inadequate ventilation (see “School Indoor Air Quality Assessment and Program Implementation.”).

This past legislative session, two bills that would have impacted school IAQ were proposed. One was Senate Bill 6356, creating a Children’s Environmental Health and Protection Advisory Council that would have been staffed by the Board. The other bill was Senate Concurrent Resolution 8426 to create a Joint select Committee on Indoor Mold Contamination that would study the health effects of mold exposure and include school districts in its advisory groups. Both bills appear to be as of this writing.

Recommended Board Motion:

No action recommended at this time.

Attachments: February 28, 2002 article, The News Tribune, “Learning about sick schools.”
“School Indoor Air Quality Assessment and Program Implementation,” R. Prill,
D. Blake, and D. Hales.